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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/775,042   | 02/06/2004  | Chien-Min Sung       | 22390.CIP           | 9003             |
| 20551  | 7590        | 10/06/2005           | EXAMINER            |                  |
| THORPE NORTH & WESTERN, LLP.<br>8180 SOUTH 700 EAST, SUITE 200<br>P.O. BOX 1219<br>SANDY, UT 84070 |             |                      | NGUYEN, THU KHANH T |                  |
|  |             | ART UNIT             |                     | PAPER NUMBER     |
|  |             | 1722                 |                     |                  |

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/775,042             | SUNG, CHIEN-MIN     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Thu Khanh T. Nguyen    | 1722                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 June 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 25-42 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/07/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of group I, claims 1-14 in the reply filed on June 29, 2005 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bundy et al (3,179,979) in view of Davies et al (5,772,756).

Bundy et al teach a high pressure die, comprising a plurality of arcuate complementary die segments (13-18) forming a horizontally oriented cavity (12), a pair of anvils, or pooch members (47), and a plurality of piston cylinder (36, 37), corresponding to the force members for controlling the movement of the die segments (col. 3, lines 3-20), wherein the die can have up to six segments that are tapered toward the center of the cavity (Fig. 2, 15-18), wherein the die segments are supported by a plurality of ram segments (27-32), wherein each ram segment having a contour surface contacting the die segments (Fig. 1, 33) to reduce the tensile stress on the die segments (col. 4, lines 6-12), wherein the pair of punch are frustoconical anvils (col. 3, lines 53-56).

Bundy et al fail to disclose the dimensions of the mold chamber, the diamond seed and the catalyst material.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Bundy et al by providing the mold chamber with appropriate dimension of the molding chamber because the size of the mold cavity or the molding chamber would depend on the size of the product.

Davies et al disclose an apparatus and method for synthesis diamond, comprising crystal diamond seeds (24), a metallic catalyst/solvent (22) and a high pressure high temperature chamber 10 for growing diamond crystal.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Bundy et al by providing a diamond seed and metallic catalyst solvent as taught by Davies et al because the diamond seed and the catalyst are necessary in forming crystal diamond.

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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5. Claims 1-24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/757,715 in view of Davies et al (5,772,756).

Claims 1-19 disclose most of the claimed features of claims 1-24, but fail to disclose the diamond seed and the catalyst material.

Davies et al disclose an apparatus and method for synthesis diamond, comprising crystal diamond seeds (24), a metallic catalyst/solvent (22) and a high pressure high temperature chamber 10 for growing diamond crystal.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify claims 1-19 by providing a diamond seed and metallic catalyst solvent as taught by Davies et al because the diamond seed and the catalyst are necessary in forming crystal diamond.

This is a provisional obviousness-type double patenting rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN

DUANE SMITH  
PRIMARY EXAMINER

D - M  
10-3-05